

AX-120

WHAT IS CLAIMED IS:

1. An apparatus for winding a wire coil on
at least one dynamoelectric machine component, said
apparatus having an axis of rotation and comprising:
at least two component assembly
5 stations;
at least one support member configured
to rotate about said axis, said support member having a
distal portion away from said axis of rotation, said
support member configured to transfer said machine
10 component between said stations; and
at least one machine component housing,
wherein:
said housing is removably fixed to
a corresponding distal portion; and
15 said housing projects from said
corresponding distal portion away from said axis of
rotation.
2. The apparatus of claim 1 wherein said
housing is cantilevered to said corresponding distal
portion.
3. The apparatus of claim 1 wherein said
housing comprises a dovetail tenon for affixing said
housing to said corresponding distal portion.
4. The apparatus of claim 1 wherein:

said corresponding distal portion comprises a dovetail mortise defined by a portion of a corresponding support member; and

said mortise is configured to be joined to a tenon on said housing.

5. The apparatus of claim 1 wherein said portion comprises steel.

6. The apparatus of claim 1 wherein:

said housing has a central axis and comprises at least one substantially planar outer surface substantially parallel to said central axis;

5 and

said housing is configured to be removably secured to said corresponding distal portion along exactly one said of said at least one surface.

7. The apparatus of claim 1 wherein:

said housing has a central axis and comprises:

a top;

5

a bottom; and

a side, said side extending between said top and said bottom;

said top, said bottom, and said side are substantially parallel to said central axis;

10 and

said housing is configured to be removably secured along said side alone.

8. The apparatus of claim 7 further comprising:

a clamp disposed substantially inside said housing and configured to secure a machine component inside said housing; and

a first actuator member, wherein:

said first actuator member is secured to said clamp;

said first actuator member extends through said side; and

said first actuator member is configured to reciprocate with respect to said central axis.

9. The apparatus of claim 8 further comprising a second actuator member, wherein said first actuator member comprises a fixture for releasably engaging said second actuator member.

10. The apparatus of claim 9 wherein said fixture is a fork appendix.

11. The apparatus of claim 9 further comprising a drive device configured to apply force to said second actuator member.

12. The apparatus of claim 11 wherein said drive unit is disposed outside of said housing.

13. The apparatus of claim 11 wherein said drive unit is fixed to said support member.

14. The apparatus of claim 1 wherein:
said support member comprises an
attachment member; and
said housing is fixed to said attachment
5 member.

15. The apparatus of claim 14 further
comprising a drive device, wherein:
said device is fixed to said attachment
member; and
5 said device is configured to move a
machine component clamp via an actuator.

16. The apparatus of claim 15 wherein:
said drive device is selected from
the group consisting of:
a. an air-pressure-driven piston;
5 b. a spring; and
c. a combination of a and b.

17. The apparatus of claim 14 wherein said
attachment member comprises steel.

18. The apparatus of claim 7 wherein:
said housing further comprises:
a hollow interior portion
defined by an interior surface; and
5 an exterior surface opposite
said side, said exterior surface extending from said
top to said bottom; and
said apparatus further comprises:

a frame; and
10 at least one shroud locking
blade; wherein:

said frame extends adjacent said
top, said exterior surface, and said bottom;

said shroud locking blade is fixed
15 to said frame and extends into said interior portion;
and

said frame is slidable with respect
to said housing in a direction substantially parallel
to said central axis.

19. The apparatus of claim 18 further
comprising a pair of locking blades having a fixed
position in a direction along said central axis.

20. A method for winding wire coils on a
machine component, said method using a winding machine
having machine component assembly stations, said method
comprising:

5 positioning a machine component housing
on a distal portion of a winding machine support
member, said winding machine having an axis of
rotation, said support member configured to transfer
machine components between said stations, wherein said
10 positioning causes said housing to project from said
distal portion away from said axis of rotation;
inserting said machine component in said
housing; and
winding wire coils onto said machine
15 component.

21. The method of claim 20 further comprising releasably fixing said housing to said distal portion.

22. The method of claim 21 wherein said releasably fixing comprises sliding a tenon into a mortise.

23. The method of claim 21 further comprising rotating said support member about said axis of rotation.

24. The method of claim 21 wherein, when said housing comprises a central axis, a top, a bottom, and a side, said side extending between said top and said bottom, said releasably fixing comprises attaching
5 said housing along said side alone.

25. The method of claim 24 wherein said inserting comprises:

clamping said machine component inside said housing using a clamp; and

5 applying force to said clamp using an elongated member that passes through said side.

26. The method of claim 20 further comprising simultaneously repositioning a pair of shroud locking blades by moving a frame slidably engaged with said housing.